Proposal # 2001	FROI	(Office Use Only)
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PSP Cover Sh	neet (Attach to the front of	each	proposal)
Proposal Title:	Hill Slough West Habitat F	Resto	ration Demonstration Project. Phase II
	California Department of F		
Contact Name:	Laurie Briden		
Mailing Address:	4001 N. Wilson Way. Stoc	kton.	CA 95205
	(209) 948-7800		
	(209) 946-6355		
Email:	lbriden@delta.dfg.ca.gov		
Amount of fund	ling requested: \$87,000	_	
Some entities ch	arge different costs depend	ent c	on the source of the Funds. If it is different for
state or federal f	unds list below.		
State cost		Fede	eral cost
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	tners? X		The California Department of Fish and Gam
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Indicate the To	pic for which you are app	lvino	(check only one box).
☐ Natural Flow I			Beyond the Riparian Comdor
Nonnative inv	asive Species	\neg	Local Watershed Stewardship
	mics/Ŝediment Transport		Environmental Education
Flood Manage	ment		Special Status Species Surveys and Studies
Contaminants	r Tidal/Marsh Habitat		Fishery Monitoring. Assessment and Research Fish Screens
_			
What county or	counties is the project locat	ted ir	n? Solano
•	•		
What CALFED	ecozone is the project loca	ated	in? See attached list and indicate number.
Be as specific a	as possible 2. Suisun M	<u> Iarsh</u>	1
• •	e of applicant (check only or	ne b	
☐ State agen			Federal agency
	n-profit joint venture		Non-profit
Local gover	mment/district		Tribes
University			Private party
Other:			

Indicate the primary species which the proposal addresses [check all that apply):
□ San Joaquin and East-side Delta tributaries fall-run chinook salmon □ Spring-run chinook salmon □ Late-fall run chinook salmon □ Fall-run chinook salmon □ Delta smelt □ Longfin smelt ☑ Splittail □ Steelhead trout □ Green sturgeon □ Striped bass □ White sturgeon ☑ All chinook species ☑ Waterfowl and Shorebirds □ All anadromous salmonids □ Migratory birds □ American shad □ Other listed T/E species: salt marsh harvest mouse, California clapper rail. black rail
Indicate the type of project (check only one box): Research/Monitoring
Is this a next-phase of an ongoing project? Yes X No Have you received funding from CALFED before? Yes X No
If yes, list project title and CALFED number Hill Slough West Habitat Restoration Demonstration Project, Phase I: 1998-F08
Have you received funding from CVPIA before? Yes NoX
If yes, list CVPIA program providing funding, project title and CVPIA number (if applicable):
By signing below, the applicant declares the following: The truthfulness of all representations in their proposal: The individual signing the form is entitled to submit the application on behalf of the applicant (if the applicant is an entity or organization): and The person submitting the application has read and understood the conflict of interest and confidentiality discussion in the PSP (Section 2.4) and Waives any and all rights to privacy and Confidentiality of the proposal on behalf of the applicant, to the extent as provided in the Section.
Laura E. Briden Printed name of applicant
Signature of applicant

Hill Slough West Habitat Restoration Demonstration Project, Phase II

Prepared in Response to:

CALFED Bay-Delta Program 2001 Proposal SolicitationPackage Ecosystem Restoration Projects and Programs

Applicant:

California Department of Fish and Game Central Valley Bay-Delta Branch 4001 North Wilson Way Stockton, California 95205 Phone (209) 948-7800

Principal Investigator:

Laurie Briden, Associate Biologist California Department of Fish and Game Central Valley Bay-Delta Branch 4001 North Wilson Way Stockton, California 95205 Phone (209) 948-7800; Fax (209) 946-6355 e-mail: Ibriden@delta.dfg.ca.gov

Type of Organization:

State Agency

Implementation Participants/Collaborators:

Current participants are the California Department of Fish and Game, the California Department of Water Resources, Suisun Resource Conservation District, and U.S. Bureau of Reclamation. Implementation, guidance, and assistance will be provided by Carl Wilcox - DFG, Sandy Morey - DFG, and Bob Garrison - DFG. Additional individuals such as Ms. Brenda Grewell, U.C. Davis, and Dr. Peter Baye, U.S. Fish and Wildlife Service, will be collaborators. The Suisun Marsh Preservation Agreement Environmental Coordination Advisoly Team will also be included in the restoration process.

Executive Summary Hilt Slough West Habitat Restoration Demonstration Project, Phase Π

Applicant:

Ms. Laurie Briden California Department of Fish and Game

Central Valley Bay-Delta Branch e-mail: Ibriden@delta.dfg.ca.gov

Amount Requested: \$87,000

4001 North Wilson Way Stockton, California 95205 Phone (209) 948-7800 FAX (209) 946-6355

Implementation **Participants/Collaborators:** Current participants are the California Department of Fish and Game (DFG), the California Department of Water Resources (DWR), Suisun Resource Conservation District (SRCD), U.S. Bureau of Reclamation, U.C. Davis, the U.S. Fish and Wildlife Service, and the Suisun Marsh Environmental Coordination Advisory Team (ECAT).

Project Description: The Hill Slough West Habitat Restoration Demonstration Project is a proposal to restore tidal action to approximately 200 acres of seasonal and permanent wetlands in the northeastern Suisun Marsh. The property is located at the Hill Slough Wildlife Area which is owned and managed by the DFG. Implementation of the plan will be carried out in four phases over approximately five years.

Hypothesis: Restoring the Hill Slough West property to a tidal wetland ecosystem will aid in the recovery of listed and special status plant and animal species occurring in the Suisun Marsh.

Primary Benefits: This project will benefit the Suisun Marsh / San Francisco Bay Ecological Management Zone by restoring land in the northern Suisun Marsh to tidal marsh. The restoration of this property will benefit listed Suisun Marsh plant species, winter-run and spring-run chinook salmon, delta smelt, splittail, California clapper rail, black rail, salt marsh harvest mouse, and other listed and special status species.

Proposed Approach: Our basic approach is to promote a self-sustaining marsh ecosystem through restoration of natural edaphic, topographic, and tidal conditions within an area that has been leveed off from tidal influence. Phase I, currently in progress, includes the formation of a steering group, coordination with the ECAT, and creation of a restoration plan which includes detailed hydrologic and topographic surveys and modeling. Phase II, contained in this proposal, will be to complete the environmental documentation and permitting. Phases III and IV will be project construction and monitoring.

Coordination with CALFED ERPP **Goals:** This project will help promote three of the six Ecosystem Restoration Strategic Goals. Goal I-At Risk Species: This project will aid in the recovery of several listed Suisun Marsh species. Goal 2-Ecosystem Processes and Biotic Communities: The goal of this project is to restore a self sustaining tidal marsh ecosystem. Goal 4-Habitats: The project will support the recovery and restoration of native species and communities as well as provide public value by allowing public access, recreation, and educational opportunities. Also, the project will address uncertainties related to shallow water, tidal, and freshwater marsh habitats.

Hill Slough West Habitat Restoration, Phase II

Project Description

Statement of Problem

Problem

From the mid-1880s to the early 1900s over 90 percent of the tidal wetland habitat in the Suisun Marsh and Bay were converted to leveed farmlands and managed wetlands. The loss of the tidal access has hindered the ecological processes and functions critical for sustaining a healthy aquatic ecosystem. These changes have created a lack of support for the Bay-Delta aquatic foodweb contributing to unhealthy fish populations. The loss of emergent tidal wetlands and channels has led to a reduction in the amount of potential rearing habitat for chinook salmon, delta smelt, and splittail. Reduction and fragmentation of marsh habitats has resulted in reduced populations of California clapper rail, salt marsh harvest mouse, and rare plants dependent on high tidal marsh and adjacent upland transition. The Hill Slough West property has been no exception to this trend of land conversion in the Suisun Marsh.

The Suisun Marsh Plan of Protection was drafted in the 1970s. The fish and wildlife element of the Plan involved a comprehensive review and inventory of the ecological attributes of the Suisun Marsh and identified problems facing marsh preservation. This document identifies tidal marsh restoration as an implementation measure to protect wildlife and its habitat in the Suisun Marsh.

Objectives

- o Convert a leveed seasonal and permanent wetland site to a self-sustaining tidal wetland ecosystem containing permanent and tidal wetlands as well as upland transition areas.
- Facilitate the establishment of habitat types used by listed and special status species in the Suisun Marsh.
- o Phase Π Objective: Complete environmental documentation and permitting to the extent needed as indicated by Phase **I.**

Conceptual Model

The Hill Slough West Restoration site has been diked for over 50 years, causing significant modifications in the habitats present. By diking, the site has been converted from open tidal wetlands to a leveed, managed wetland with little of the original topography or hydrology remaining. The **loss** of natural flows and topographic features has, in turn, led to the loss of significant tidal marsh habitats on the site, making the site uninhabitable by many listed Suisun Marsh species.

The conceptual model being used in restoration of the Hill Slough West site predicts that when the topography and hydrology are restored, tidal habitats will form creating a site similar to its original state. The first step in the process is to restore the gross topography of the site, taking into account the desired hydrologic tidal regime. The topographic design must take into account the tidal flows surrounding the site, the effect a breach in the levee will have on tidal action, and the sediment loads in the surrounding channels. The hydrology within the site (i.e. channels, amounts and gradients of intertidal area) will be determined by the gross topography of the site and the tidal regimes. Conversely, the open tidal action on the site will sculpt the site's fine topographic features.

The restored topographic and hydrologic features will determine the habitat types that are formed on the site. Marsh plant species will colonize the site in areas that match their living requirements. These marsh plant species will form communities, creating habitats. **As** habitats develop, Suisun Marsh fish and wildlife species will move into inhabit those areas, creating an area much like the site prior to being leveed.

There are some uncertainties in applying the conceptual model to real-life restoration activities. First, surveys and modeling of the hydrology and topography of a restoration site may be as accurate as possible, but the true accuracy will only be known after restoration. Second, it is unknown how long it will take for native plant species to regenerate and whether invasive species will colonize the area. There are also uncertainties in the size and mobility of Suisun Marsh listed plant and wildlife species population and their ability to colonize a restoration site without connecting restored habitats.

These uncertainties are being addressed in the Hill Slough West restoration plan and by the **CALFED** ERP.

- The first uncertainty is being addressed by conducting detailed hydrologic and topographic surveys. These surveys and the related modeling that will guide restoration efforts are being conducted by a consulting firm with experience in accurately predicting restoration conditions in tidal wetlands.
- Invasive species control measures are being included in the restoration plan for Hill Slough West to address the second uncertainty.

• The last uncertainty is addressed by the CALFED ERP. CALFED has targeted restoration in the Suisun Marsh as a priority in order to restore the connectedness of habitats. This will allow movement of special status species into restored areas.

Phase II, specifically, will accomplish the completion of environmental documentation and permitting. Phase II will allow the project to move forward to project implementation in phases 111 and IV.

Hypothesis

The hypothesis being tested by this project is as follows: Restoring the Hill Slough West property to a tidal wetland ecosystem will aid in the recovery of listed and special status plant and animal species occurring in the Suisun Marsh. Testing this hypothesis through the restoration and monitoring of Hill Slough West will address three of the ERP's Strategic Goals.

Goal 1 - At Risk Species: The Hill Slough West Habitat Restoration Demonstration Project is expected to aid in the recovery of several listed and special status species by restoring their natural habitat within their current range. Some of the species that will benefit from the restoration of this property are: listed Suisun Marsh plant species, winter-run and spring-run chinook salmon, delta smelt, splittail, California clapper rail, black rail, and the salt marsh harvest mouse.

Goal 2 - Ecosystem Processes and Biotic Communities: The proposed restoration project will take an encompassing tidal marsh ecosystem approach. Detailed hydrologic and topographic surveys are being conducted in Phase I so that sedimentation and tidal regimes may be accurately modeled and predicted. These surveys will also aid in predicting the self-sustaining habitats that will form on the site.

Goal **4** - Habitats: The Hill Slough West Habitat Restoration Demonstration Project will contribute to restoring large expanses of functional brackish tidal marsh and tidal perennial aquatic habitats. Restoring these habitats will aid in the recovery and restoration of native species and biotic communities in the Suisun Marsh. In addition to ecological values, the planned interpretive component of the Hill Slough West Habitat Restoration Demonstration Project will allow for public access and recreation at the restoration site. The proposed project is located in a highly visible site allowing for a great opportunity to inform and educate a large number of people about restoration activities and processes.

The proposed project also addresses uncertainties related to shallow water, tidal and freshwater marsh habitats identified by CALFED. The project planning is concentrated on restoring the appropriate hydrology and topography of the site and allowing natural regeneration. By allowing natural regeneration, implementing an extensive monitoring program, and controlling invasive, non-native species we will better understand the tidal wetland regeneration process'and the spread of invasive species. We will also be able to assess the effectiveness of our modeling techniques in predicting the hydrology of the completed restoration project.

Adaptive Management

The Hill Slough West Habitat Restoration Demonstration Project falls under the Initiate Restoration Actions (4): Undertake Pilot /Demonstration Projects category in the adaptive management process. The goals of recovering at-risk species and habitats were set forth by CALFED in the Ecosystem Restoration Strategic Goals. These goals were presented under the concept that if the habitats are restored, at-risk species populations will move or grow to fill those available habitats.

Restoration projects elsewhere have developed hydrologic and sediment models of tidal marshes. Due to the complexity of hydrologic conditions, sedimentation rates, and topography in tidal systems, it is best to develop a physical model specific to each restoration site. Currently this site specific, 'dynamicmodel of hydrologic and topographic conditions is being completed for the Hill Slough West Restoration site. The site-specific model will allow managers to best predict habitat development and species use. This approach has been used elsewhere in the Bay Area such as Martinez Regional Shoreline Marsh Enhancement, Sonoma Baylands Marsh Restoration, Cooley Landing Salt Pond Restoration, and Crissy Field Marsh Restoration. However, this approach has yet to be used in the Suisun Marsh. The Hill Slough West Habitat Restoration Demonstration Project will help determine the usefulness of this approach for restoration projects in the Suisun Marsh. The Hill Slough West Habitat Restoration Demonstration Project will also aid in assessing the accuracy of habitat development predictions. In turn, this information will allow managers to decide whether to use this approach for large-scale restoration activities in the Suisun Marsh.

In addition to a site specific model, the Hill Slough West Habitat Restoration Demonstration Project will have the benefit of preliminary data being collected in the CALFED funded Sacramento-San Joaquin Delta Breached-Levee Wetland Study ("BREACH"). The BREACH study will be forming a model of how tidal wetlands evolve where levees have breached. In the Suisun Marsh, sediment samples are being taken to provide information of sediment accretion rates on breached levee sites. The information gathered from the sediment samples will allow engineers to better predict the sedimentation rates at the Hill Slough West restoration site. The information will be provided by the private consulting firm that has been contracted for drafting a restoration plan for Hill Slough West. This firm is also involved in data collection in the Suisun Marsh for the BREACH project. When applicable, the firm will apply the data collected for the BREACH project to the creation of the sedimentation model for Hill Slough West.

Post project monitoring planned for Phase **IV** of the project will allow for the assessment of the success of the approach and predictions made in Phase I.

Proposed Scope of Work

Location of Project

The Hill Slough West Project is a 200 acre area located west of Grizzly Island Road on Hill Slough Wildlife Area in the northeastern Suisun Marsh approximately two miles east of Suisun City in Solano County (Figure 1). The project's center has a UTM of **854326.** The project area has levees which allows the northern portion to have been grazed and the southern portion managed as a permanent wetland. The site is accessible to the public.

Project Approach

Project phases: There are four phases for completion of the restoration project.

Phase I is currently in progress and is composed of the following tasks. Task 1 was the formation of an interdisciplinary interagency team. This team will help guide the selection of a consultant, frame management strategies for the restoration of native plant communities, and outline education and interpretive opportunities. Task 2 is coordination with the Environmental Coordination Advisory Team (ECAT). Tasks 3 was to hire a consultant to with expertise in the Suisun and San Francisco Bay area and experience with successful tidal wetlands restoration projects in the Bay. Task 4 through 9 are to conduct a detailed topographic and hydrologic surveys; develop a restoration plan; develop a monitoring plan; prepare a habitat mosaic and interpretive program; and start environmental compliance and permitting.

Phase II, contained in this proposal, will be to complete the environmental documentation and permitting as required by CEQA; coordinate with USFWS on NEPA and ESA; obtain permits for construction of the project as required from San Francisco Bay Conservation and Development Commission; U.S. Army Corps of Engineers; and coordinate with Caltrans, State Water Resources Control Board, SRCD, PG&E, and Solano County Mosquito Abatement. **An EA/IS** will be prepared and a Negative Declaration and FONSI are expected.

As part of Phase 11, presence / absence surveys will be conducted for listed species that may impact the permitting process. All species surveys will be conducted according to U S M S protocols specific to the Suisun Marsh. Pre-project surveys on the restoration site for salt marsh harvest mouse will be conducted by CDFG as required by the Suisun Marsh Plan of Protection.

There are **two** other phases. Phase **III** is the restoration plan implementation; and Phase **IV** will be the reestablishment of rare plant communities, commencement of monitoring, and interpretive program implementation.

Our basic approach is to promote a self-sustaining marsh ecosystem through restoration of natural edaphic, topographic, and tidal conditions within an area that has been leveed off from tidal influence. We will rely on natural abiotic and biological successional processes to promote

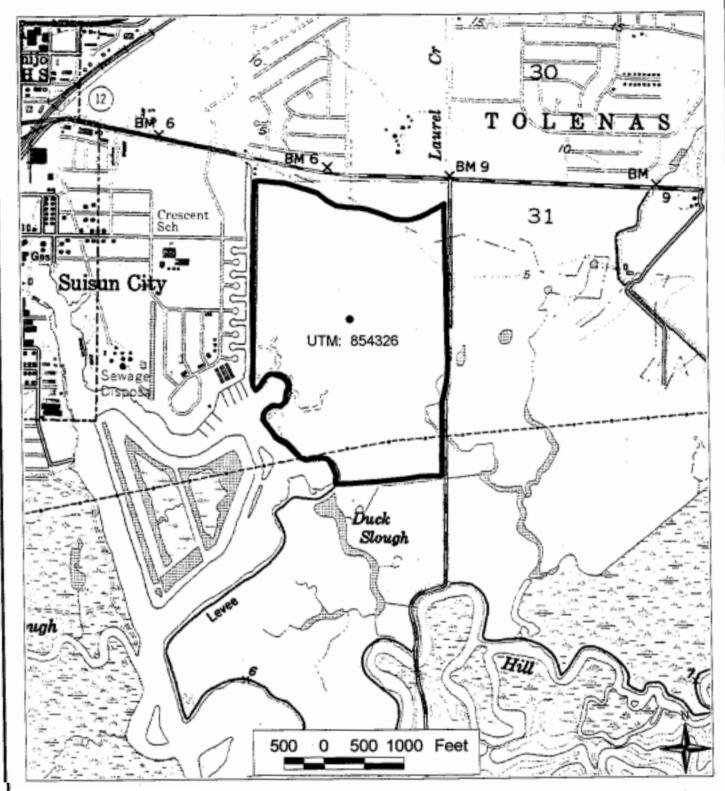
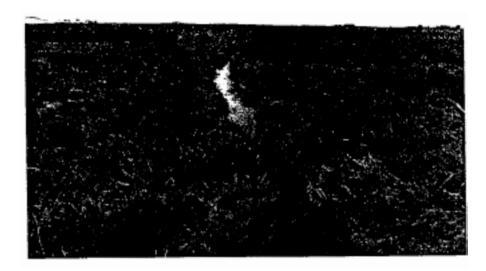


Figure 1. Hill Slough West Restoration Demonstration Project

Source: Department of **Fish** and Game, CVBDB Special Water Projects, Suisun Marsh





Picture 1. Presently, remnant ditches form straight channels for water conveyance on Hill Slough West.



Picture 2. Screw gates supply water from Suisun Slough to the Hill Slough West property.

gradual marsh regeneration, rather than employing an aggressive approach that would entail extensive planting and seeding. Primary restoration methods will entail selective or complete levee removal, limited excavation of higher order channels, limited replanting of sensitive plant species, and a program **of** invasive species management.

A post-project monitoring plan is currently being written as part of Phase I of the project. Quality assurance measures are being included in this plan.

Monitoring and Assessment Plans

The monitoring component **of** the project is currently being developed during Phase I of the project and will be presented with the restoration plan. Monitoring will occur in Phase IV and will include, but not be limited to: water quality in Hill **Slough**; fisheries occurrence in the restored tidal wetland; wildlife use patterns in all of the restored areas; and vegetation growth, trends, and recruitment throughout the restoration area to monitor plant composition and makeup. **As** part of the monitoring plan several testable hypotheses will be developed. Those hypotheses will be related to how fish and wildlife use the restored tidal wetland as well as how special status plants survive and reproduce. Monitoring will be conducted by **IEP** staff and qualified staff and volunteers associated with the Hill Slough Wildlife Area.

Data Handling and Storage

Designs and data, once monitoring begins, will be compiled and stored by Ms. Laurie Briden, Associate Biologist with the California Department of Fish and Game. Progress and data will be made accessible through the IEP webpage.

Expected Products/Outcomes

Expected products of Phase II are all environmental documentation and permits necessary to begin construction of the project. **An** EA/IS will be prepared and a Negative Declaration and FONSI are expected. However this list may include, but is not limited to, documents such as an Environmental Impact Report, a CDFG Streambed Alteration Permit, an incidental take permit, and an USCOE 404 permit.

Work Schedule

Work on Phase II will begin after completion of Phase I - the restoration plan. Phase I is expected to be completed in February 2001. The conceptual restoration plan will enable us to assess exactly what permits and environmental documentation will need to be completed. The permitting and environmental documentation process is expected to begin in March 2001 and be completed by November 2001.

Feasibility

The project applicant will complete environmental compliance and permitting needed to carry out the project. The applicant will work closely with the U.S. Army Corps of Engineers to ensure the application for a 404 permit is complete. The deliverables associated with this task are a draft Environmental Assessment/Initial Study and draft USCOE permit application. This task will be completed by November 2001.

The DFG, Grizzly Island, is the owner of the property and is willing to participate in the restoration and management of Hill Slough West. Contracts between all parties would be written and any necessary permits would be issued. The proposed project does not conflict with other projects in the area. Construction would begin in Phase III and would be completed in about two years. The proposed project will comply with all applicable laws and regulations.

Applicability to CALFED ERP Goals

ERP Goals

Goal 1 - At Risk Species: The Hill Slough West Habitat Restoration Demonstration Project is expected to aid in the recovery of several listed and special status species by restoring their natural habitat within their current range. Some of the species that will benefit from the restoration of this property are: listed Suisun Marsh plant species, winter-run and spring-run chinook salmon, delta smelt, splittail, California clapper rail, black rail, and the salt marsh harvest mouse.

The project will help address the general target for the tidal brackish marsh special-status plant species of maintaining genetic diversity, preventing species extinction from localized catastrophic occurrences, and promoting the sustainability of each species. Two plant species that could benefit the most are soft bird's-beak and Suisun thistle. Attachment A shows the contribution Hill Slough Restoration Project makes to visions, programmatic actions, and objectives of the ERPP.

Goal 2 - Ecosystem Processes and Biotic Communities: The proposed restoration project will take an encompassing tidal marsh ecosystem approach. Detailed hydrologic and topographic surveys are being conducted in Phase I so that sedimentation and tidal regimes may be accurately predicted. These surveys will also aid in predicting the self-sustaining habitats that will form on the site.

Goal **4** - Habitats: The Hill Slough West Habitat Restoration Demonstration Project will aid in the recovery and restoration of native species and biotic communities in the Suisun Marsh. In addition to ecological values, the planned interpretive component of the Hill Slough West Habitat Restoration Demonstration Project will allow for public access and recreation at the restoration site. The proposed project is located in a highly visible site allowing for a great opportunity to inform and educate a large number of people about restoration activities and processes.

Compatibility with Non-Ecosystem Objectives

The proposed project is compatible with the objectives of the other CALFED programs and does not conflict with any of the potential water supply and storage conveyance alternatives. The proposed project will help address objectives of the Water Quality Program. According to preliminary data presented by the CALFED Suisun Marsh Levee Breach Modeling Study, a narrow breach in the northern Suisun Marsh, such as the type likely needed to restore tidal action to Hill Slough West, will improve water quality by lowering salinity levels in the Delta.

Relationship to Other Ecosystem Restoration Projects

The proposal dovetails with long-term wetland goals set for the Central Valley and Delta by the North American Central Valley Habitat Joint Venture program. The project is also consistent with long-term wetland goals developed by the San Francisco Bay Wetlands Ecosystem Goals Project which recommends restoration of tidal marsh in the Hill Slough area. The project also dovetails with tidal wetlands recovery efforts of the USFWS and is consistent with the visions, implementation objectives, and targets for CALFED's ERP.

A secondary benefit of implementing this restoration plan is that it would begin to solicit the interest of other parties to participate in additional restoration efforts. It offers the first step in developing a larger scale, more contiguous restoration effort that could eventually join Hill Slough, Peytonia Slough, Joice Island, and Rush Ranch. Completion of this project will provide **a** base line for habitat restoration costs for restoring tidal wetlands in the Suisun Marsh. This will allow CALFED to accurately forecast costs of meeting the restoration targets in Suisun Marsh. In addition, landowners, wetland managers, and local communities will have become involved in the process and have a stronger understanding of CALFED's objectives.

Request **for** Next-Phase Funding

This proposal covers Phase II of the Hill Slough West Restoration Demonstration Project. This phase covers the permitting necessary to go forward with construction of the proposed project. Phase I of the project is currently in progress. A summary of the current status of Phase I can be found in Attachment B.

Phase **I** is in progress and is composed of the following tasks.

Task 1 was the formation of an interdisciplinary interagency team. This team will help guide the selection of a consultant, frame management strategies for the restoration of native plant communities, and outline education and interpretive opportunities. Completed.

Task 2 is coordination with the Environmental Coordination Advisoly Team (ECAT) which is underway and will **be** ongoing. ECAT has been established to oversee compliance with existing permit and biological opinion requirements for DWR and USBR in the Suisun

Marsh

Tasks 3 was to hire a consultant to with expertise in the Suisun and San Francisco Bay area and experience with successful tidal wetlands restoration projects in the Bay. Completed.

Task **4** through 9 are to conduct a detailed topographic and hydrologic surveys; develop a restoration plan; develop a monitoring plan; prepare a habitat mosaic and interpretive program; and start environmental compliance and permitting. **In** Progress.

System-Wide Ecosystem Benefits

This project will benefit the system by connecting tidal wetland habitats in the north central Suisun Marsh to Hill Slough. By connecting this restoration area with existing tidal habitat, the project has more value than if it were isolated. Additionally, this project would reverse the stressor of water management activity. Past water management activities, specifically diking, has resulted in increased depth and duration of flooding in high marsh zone beyond the range of natural variability and seasonality. The northern part of the project site, also due to levees, has seen an elimination of any tidal action.

Applicant Qualifications

The CDFG has extensive experience in developing and managing fish and wildlife habitat on numerous wildlife areas throughout the State, managing approximately 15,000 acres in the Suisun Marsh.

The Technical Advisoly Team is composed of experienced botanists and wildlife interpreters and specialists in the science of restoration. Mr. Bob Garrison is the DFGs statewide coordinator of interpretive services. Ms. Sandy Morey is the DFGs endangered plant program coordinator. Mr. Carl Wilcox is a DFG expert in environmental review and regional fish, wildlife, and wetlands planning. Ms. Brenda Grewell is a plant/wetland ecologist with 14 years professional experience in California wetlands, including 10 years working with endangered plant and avian species and tidal wetland communities in Suisun Marsh, and is a doctoral student in Ecology with the UC Davis Department of Wildlife, Fish, and Conservation Biology. Mr. Peter Baye of the U.S. Fish and Wildlife Service also serves on the Advisory Committee.

Summary of Qualifications of Principal Participants

Name: Laurie Briden

Position: Associate Biologist, Department of Fish and Game,

Central Valley Bay-Delta Branch

Education: Bachelor of **Arts**, Environmental Biology, California State University,

Fresno, June 1981

Post-Baccalaureate work (24 units), Wildlife Biology, California State

University, Fresno

Experience

1990 - Present Water Project Planning and Evaluation Unit, duties include:

- Perform impact analyses on existing and proposed water development plans by DWR for the Sacramento-San Joaquin Delta
- Member of the CALFED Integrated Storage Investigation examining surface water storage and conveyance components
- Fish and Game representative on the Ecological Coordination Advisory Team
- Fish and Game representative on Suisun Marsh Technical Committee
- Lead on conducting studies to evaluate the wildlife impacts associated with proposed actions affecting the State Water Project
- Lead for planning the monitoring program for wildlife at the Prospect Island Restoration Project
- Monitor Grizzly Slough mitigation and restoration project for Department of Water Resources

Publications: Briden, Laurie. 1998. The Bay-Delta. Fish and Game Today, Volume 45,

No. 3, April/May/June issue.

Name:

Frank G. Wernette

Position:

Senior Biologist, Department of Fish and Game,

Central Valley Bay-Delta Branch,

Education:

Bachelor of Science, Wildlife Management, California State University,

Humboldt, June 1973

Experience:

1990 **-** Present:

Supervisor of the Water Project Planning and Evaluation Unit.

Responsible for the evaluation of proposed State Water Project water storage and conveyance projects throughout the State with an emphasis on the Sacramento-San Joaquin Delta. Oversees analysis of fish and wildlife impacts associated with water project development. Currently assists the CALFED Bay-Delta Program in developing the comprehensive Ecosystem Restoration Program Plan for CALFED. Acts as the Department's technical load in associated fish and wildlife impacts of the Delta Wetlands.

technical lead in assessing fish and wildlife impacts of the Delta Wetlands Project and developing appropriate mitigation measures to offset impacts.

1980 - 1990:

Fish and Game representative on Suisun Marsh Technical Committee. Responsible for providing wildlife input to the committee for the purpose of planning and implementing the Suisun Marsh Plan of Protection. Also, responsible for performing wildlife habitat monitoring studies in the Suisun Marsh. Participated in negotiations for the Suisun Marsh Preservation Agreement by providing technical wildlife input to the principal

Department of Fish and Game negotiators.

1975 - 1980:

Wildlife Biologist, Region 2, Department of Fish and Game. Lodi Unit Manager responsible for all wildlife related issues in San Joaquin, Calaveras and western Alpine counties. Primary focus on wildlife and wildlife habitat issues in the Sacramento-San Joaquin Delta.

1973 **-** 1975:

Wildlife Biologist, Region 2. Assigned to trainees position and assisted with various fish and wildlife projects throughout Region 2.

Publications:

Wernette, F.G. 1985. The 1981 Suisun Marsh Vegetation Survey. Interagency Ecological Study Program for the Sacramento-

San Joaquin Estuary. Technical Report #10. 23 p.

Budget

Personnel Budget

Task 1. Pre-Project Surveys					
Personnel	Direct Labor Hours	Total Salary	Total Benefits (20.48%)	Total	
EsII	2 months (½ time)	\$3,854.00	\$798.30	\$4,643.30	
Task 1 Total				\$4,643.30	
	Task 2. Environmental Documentation				
Personnel	Direct Labor Hours	Total Salary	Total Benefits (20.48%)	Totals	
Es II	8 months (½ time)	\$15,416.00	\$3157.20	\$18,573.20	
ES III	9 months (% time)	\$32,987.25	\$9,022.35	\$42,009.60	
Task 2 Total				\$60,582.80	
Perso	Personnel Total \$65,226.10				

Total Budget (CALFED) funds only

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Direct	Service	Material and	Miscellaneous and	Overhead and	Total Cost
Salary and	Contract	Permit Fees	other Direct Costs	Indirect Costs	
Benefits				(18.54%)	
\$65,226.10	none	\$4,500	\$4,000	\$13,668.82	\$87,394.92

Personnel Budget

Personnel	Direct Labor Hours	Total Salary	Total Benefits (27.35%)	Totals
ES II	9 months (½ time)	\$17,343.00	\$4,743.48	\$22,086.48
ES III	9 months (¾ time)	\$32,987.25	\$9,022.35	\$42,009.60
Project Total				\$64,096.08

Total Bud et	CALFED	unds only	1		
Direct Salary and Benefits	Service Contract	Material and Permit Fees	Miscellaneous and other Direct Costs	Overhead and Indirect Costs (18.54%)	Total Cost
		\$4,500	\$5,000	\$13,644.72	\$87,240.81

Cost-Sharing

For Phase II, pre-project monitoring on the restoration site for the salt marsh harvest mouse will be completed by the DFG as part of ongoing work required by the Suisun Marsh Plan of Protection.

The Hill Slough West Habitat Restoration Demonstration Project is located on property owned and managed by DFG thereby eliminating property acquisition costs. Phase III will be funded using a portion of approximately \$3 million received from DWR as part of the Plan of Protection. These funds will help leverage funding provided by CALFED.

Local Involvement

The property is located at the Hili Slough Wildlife Area which is owned and managed by the DFG at Grizzly Island Wildlife Area; the proposed project is supported by the DFG manager in the Marsh. The proposed project is also supported by Suisun Resources Conservation District with Mr. Steve Chappell participating in the technical advisory committee.

Mr. Dennis D. Beebe, Manager for Solano County Mosquito Abatement District has been contacted regarding the proposed project and expressed gratitude for being contacted during the planning stages and happiness to help in any way possible. Mr. Beebe has provided criteria for mosquito prevention.

The following agencies have been mailed copies of this proposal. The cover letters can be found in Attachment C.

Barry Munowitch Suisun City Planning Department Suisun City Solano County Environmental Management Planning Department Solano County

Jeffrey Blanchfield Chief Planner San Francisco Bay Conservation and Development Commission (BCDC)

Compliance with Standard Terms and Conditions

No specific deviations from contractual terms and conditions are required for implementation of Phase 11 of the plan at this time. Should this project move forward, all terms and contracts will be written and submitted to CALFED for approval. The DFG is not aware of any potential conflicts of interest.

Literature Cited

- 1975. Fish and Wildlife Element Suisun Marsh Protection Plan. Jones and Stokes Associates, Inc. and EDAW, Inc. For the California Department of Fish and Game. 412 pp.
- 1984. Plan of Protection for the Suisun Marsh including Environmental Impact Report California Department of Water Resources. Central District. 176pp.
- December 1991. Status and Trends Report on Wetlands and Related Habitats in the San Francisco Estuary. San Francisco Estuary Project.
- Josselyn, **M.** 1983. The ecology of San Francisco Bay tidal marshes: a community profile. USFWS, Division of Biological Services, Washington D.C. FWS/OBS 83/23. 102pp.
- Swift, Kendra. 1988. Salt Marsh Restoration: Assessing a Southern California Example. San Diego State University. 84pp.

Zedler, Joy B., Principal Author. 1996. Tidal Wetland Restoration: A Scientific Perspective and Southern California Focus. Published by the California Sea Grant College System, University of California, La Jolla, California. Report No. T-038.

ATTACHMENT A

CONTRIBUTIONS HILL SLOUGH RESTORATION PROJECT MAKES TO VISIONS, PROGRAMMATIC ACTIONS, AND OBJECTIVES OF THE FEBRUARY 1999 ECOSYSTEM RESTORATION PROGRAM PLAN

VISIONS

	71816118	
SPECIES, COMMUNITY OR LOCATION	BENEFICIAL ACTION	ERPP
Suisun Bay and Marsh Ecological Management Unit	Restoration of natural marsh features such setidal channels to the Suisum Marsh	ERPP. Volume II, page 131
Bay-Delta Aquatic Foodweb	Restoration of additional tidal wetlands in the Suisun Marsh	ERPP, Volume I, page 98
Tidal Marsh Plant Community	Restoration of additional suitable brackish wetlands	ERPP, Volume I, page 373
Tidal Perennial Aquatic	Restorationoftidal action to diked lands	ERPP. Volume II. page 134
Essential Fish Habitat	Rstcration of additional tidal wetlands	ERPP, Volume II, page 135
California Clapper Rail	Restoration of additional suitable brackish wetlands	ERPP, Volume II, page 138
California Black Rail	Restoration ofmarshes and emergent wetlands in the North Bay	ERPP, Volume II, page 138
Suisun Sang Sparrow	Restoration of additional suitable tidal wetlands in the Suisun Marsh	ERPP, Volume II, page 138
Longfin Smelt & Splittail	Restoration oftidal wetlands of the Suisun Marsh	ERPP, Volume II, page 136
Delta Smelt	Restorationof additional tidal wetlands	ERPP, Volume II, page 134
Native Resident Fish Species, Striped Bass, Marine Fishes, Shellfish	Restoration oftidal wetlands improves water quality which helps maintain healthy fish populations	ERPP, Volume II, pages 136-137

PROGRAMMATIC ACTIONS

Bay-Delta Aquatic Foodweb	Restoration oftidal wetlands in the Suisun Bay area	ERPP, Volume II, page 144
Saline Emergent Wetlands	Return acquired wetlands to tidal action	ERPP. Volume II, page 146
California Black Rail	Restorationof additional suitable brackishemergent wetlands	ERPP, Volume 1, page 249
Shorebird	Provide tidal foraging habitat	ERPP, Volume I, page 355

OBJECTIVES

Saline Emergent Wetlands	Restoration of saline emergent wetlands to the Suisun Marsh	ERPP, Volume I, page 133
Salt Marsh Harvest Mouse	Restoration ofmarshland habitat	ERPP. Volume I. page 261
Suisun Ornate Shrew	Restoration of tidal habitat	ERPP, Volume I, page 264
Western Least Bittern	Restoration oftidal action to aquatic habitat	ERPP, Volume L page 309
Waterfowl	Restoration oftidal sloughs	ERPP, Volume I, page 359

ATTACHMENT B

Summary of Hill Slough West Habitat Restoration Demonstration Project, .Phase I

Project Description: The Hill Slough West Habitat Restoration Demonstration Project is a proposal to restore tidal action to approximately 200 acres of seasonal and permanent wetlands in the northeastern Suisun Marsh. The property is located at the Hill Slough Wildlife Area which is owned and managed by the California Department of Fish and Game (DFG). Implementation of the plan will be carried out in four phases over approximately five years.

Hypothesis: Restoring the Hill Slough West property to a tidal wetland ecosystem will aid in the recovery of listed and special status plant and animal species occurring in the Suisun Marsh.

Conceptual Model: The model being used in restoration of the Hill Slough West site predicts that when the topography and hydrology are restored, tidal habitats will form creating a site similar to its original state. The first step in the process is to restore the gross topography of the site, taking into account the desired hydrologic regime. The topographic design must take into account the tidal flows and levels surrounding the site, the effect a breach in the levee will have on the tidal action, and the sediment loads in the surrounding channels. The hydrology within the site (i.e. channels, amounts and gradients of intertidal area) will be determined by the gross topography of the site and the tidal regimes. Conversely, the open tidal action on the site will sculpt the site's fine topographic features.

The restored topographic and hydrologic features will determine the habitat types that are formed on the site. Marsh plant species will colonize the site in areas that match their living requirements. These marsh plant species will form communities, creating habitats. As habitats develop, Suisun Marsh fish and wildlife species will move into inhabit those areas, creating an area much like the site prior to being leveed.

Adaptive Management: The Hill Slough West Habitat Restoration Demonstration Project falls under the Initiate Restoration Actions (4): Undertake Pilot / Demonstration Projects category in the adaptive management process

Due to the complexity of hydrologic conditions, sedimentation rates, and topography in tidal systems, it is best to develop a physical model specific to each restoration site. Currently this site specific, dynamic model of hydrologic and topographic conditions is being completed for the Hill Slough West Restoration site. The site-specific model will allow managers to best predict habitat development and species use. This approach has been used elsewhere in the Bay Area such as Martinez Regional Shoreline Marsh Enhancement, Sonoma Badlands marsh Restoration, Cooley Landing Salt Pond Restoration, and Crissy Field Marsh Restoration. However, this approach has yet to be used in the Suisun Marsh. The Hill Slough West Habitat Restoration Demonstration Project will help determine the usefulness of this approach for restoration projects in the Suisun Marsh. The Hill Slough West Habitat Restoration Demonstration Project will also aid in assessing the accuracy of habitat development predictions. In turn, this information will allow

managers to decide whether to use this approach for large-scale restoration activities in the Suisun Marsh.

Current Status: Phase **I** is in progress and is composed of the following tasks.

- Task 1 was the formation of an interdisciplinary interagency team. This team will help guide the selection of a consultant, frame management strategies for the restoration of native plant communities, and outline education and interpretive opportunities. This team includes *Mr*. Carl Wilcox (DFG), Mr. Bob Garrison (DFG), *Mr*. Dennis Becker (DFG), Mr. Peter Baye (USFWS), Ms. Terri Gaines (DWR), Mr. Steve Chappell (SRCD), and Ms. Brenda Grewell (UCD). Completed.
- Task **2** is coordination with the Environmental Coordination Advisory Team (ECAT) which is underway and will **be** ongoing. ECAT has been established to oversee compliance with existing permit and biological opinion requirements for DWR and USBR in the Suisun Marsh.
- Tasks 3 was to hire a consultant to with expertise in the Suisun and San Francisco Bay area and experience with successful tidal wetlands restoration projects in the Bay. The contract with Philip Williams and Associates, Inc. was completed in early April. Completed..
- Task 4 through 9 are to conduct a detailed topographic and hydrologic surveys; develop a restoration plan; develop a monitoring plan; prepare a habitat mosaic and interpretive program; and start environmental compliance and permitting. In Progress.

Fiscal Status: The contract awarded by CALFED to the DFG for the Hill Slough West Habitat Restoration Demonstration Project, Phase I was for the amount of \$200,000. The DFG has charged approximately \$1500 to the contract. A subcontract for consulting work was completed with Philip Williams and Associates, Inc. in early April. The bid for the subcontract was for \$125,000. No invoices have been received from Philip Williams and Associates, Inc.

Monitoring Program: The monitoring component of the project is currently being developed during Phase I of the project and will be presented with the conceptual restoration plan. Monitoring will occur in Phase IV and will include, but not be limited to: water quality in Hill Slough; fisheries occurrence in the restored tidal wetland; wildlife use patterns in all of the restored areas; and vegetation growth, trends, and recruitment throughout the restoration area to monitor plant composition and makeup. As part of the monitoring plan several testable hypotheses will be developed. Those hypotheses will be related to how fish and wildlife use the restored tidal wetland as well as how special status plants survive and reproduce. Monitoring will be conducted by IEP staff and qualified staff and volunteers associated with the Hill Slough Wildlife Area.

ATTACHMENT C



http://www.dfg.ca.gov

Central Valley Bay-Delta Branch 4001 North Wilson Way Stockton, California 95205 (209) 948-7800



April 28,2000

Environmental Management Solano County Planning Department 601 Texas Street Fairfield, California 94533

Solano County Planning Department;

The California Department of Fish and Game has received funds to restore a piece of property in the northern Suisun Marsh from a diked wetland to an open tidal brackish marsh.

This piece of property is located on the comer of Grizzly Island Road and Highway 12 in Suisun City. We don't anticipate the Hill Slough West Habitat Restoration Demonstration Project having any negative effects on Solano County.

We would like to include you in the planning process for **this** project. In order for you to get a better idea of the project **and** its goals a copy of our **Phase** II proposal is enclosed. We look forward to working closely with you in the near future. If you have any questions feel free to contact me directly at (209) 942-6071.

Sincerely,

Laurie Briden

Associate Biologist

Laurie Budin

Enclosure

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http://www.dfg.ca.gov

Central Valley Bay-Delta Branch 4001 North Wilson Way Stockton, Caliiomia 95205 (209) 948-7800



April 28,2000

Mr. Barry Munowitch Suisun City Planning Department 701 Civic Center Boulevard Suisun City, California **94585**

Mr. Munowitch;

The California Department of Fish and Game has received funds to restore a piece of property in the northern Suisun Marsh from a diked wetland to **an** open tidal brackish marsh. This piece of property is located on the comer of Grizzly Island Road and Highway 12 in Suisun City. We don't anticipate the Hill Slough West Habitat Restoration Demonstration Project having any negative effects on Suisun City.

We would like to include you in the planning process for this project. In order for you to get a better idea of the project and its goals **a** copy of **our** Phase II proposal is enclosed. We look forward to working closely with you in the near future. If you have any questions feel free to contact me directly at '(209) **942-6071**.

Sincerely,

Laurie Briden

Laurie Oridon

Associate Biologist

Enclosure

LB00D079.wpd:gw/cc_pg1



http://www.dfg.ca.gov

Central Valley Bay-Delta Branch 4001 North Wilson Way Stockton, California 95205 (209) 948-7800



April 28,2000

Mr. Jeffrey Blanchfield, Chief Planner San Francisco Bay Conservation and Development Commission 30 Van Ness Avenue, Suite 2011 San Francisco, California 94102

Mr. Blanchfield;

The California Department of Fish **and** Game has received funds to restore a piece of property in the northern Suisun Marsh from a diked wetland to an open tidal brackish marsh. This piece of property is located on the comer of Grizzly Island Road and Highway 12 in Suisun City. We don't anticipate the Hill Slough West Habitat Restoration Demonstration Project having any negative effects.

We would like to include you in the planning process for this project. In order for you to get a better idea' of the project **and** its goals **a** copy of our Phase Π proposal is enclosed. We look forward to working closely with you in the near future. If you have any questions feel free to contact me directly at (209) 942-6071.

Sincerely,

Laurie Briden
Associate Biologist

Enclosure

LB00D079.wpdigv/cc_pg3

Conserving California's Wildlife Since 1870

Central Valley Bay-Delta Branch
North Wilson Way
kton, California 95205
(209) 948-7800



March 1, 1999

Mr. Dennis Beebe Mosquito Abatement District 29 15 Industrial Court Fairfield, California 945334500

Dear Mr. Beebe:

The Department of Fish and Game (DFG) is considering restoration of tidal action to 200 acres of seasonal and permanent wetland in northeastern Suisun Marsh. The property is located at the Hill Slough Wildlife Area which is owned and managed by DFG and is bounded on the north by Highway 12 and on the east by Grizzly Island Road. **This** project will be a collaborative effort with Department of Water Resources, Suisun Resource Conservation District, **U.S.**Fish and Wildlife Service, and DFG staff, including Grizzly Island personnel involved.

During our conversation of February 25, 1999, you mentioned guidelines your department has regarding tidal wetlands. I **am** requesting a copy of these documents and any other information which you think I should be aware of in the initial stages of this effort.

If you would like more information on this proposed project please give me a call at (209) 942-6071.

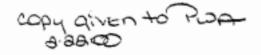
Sincerely,

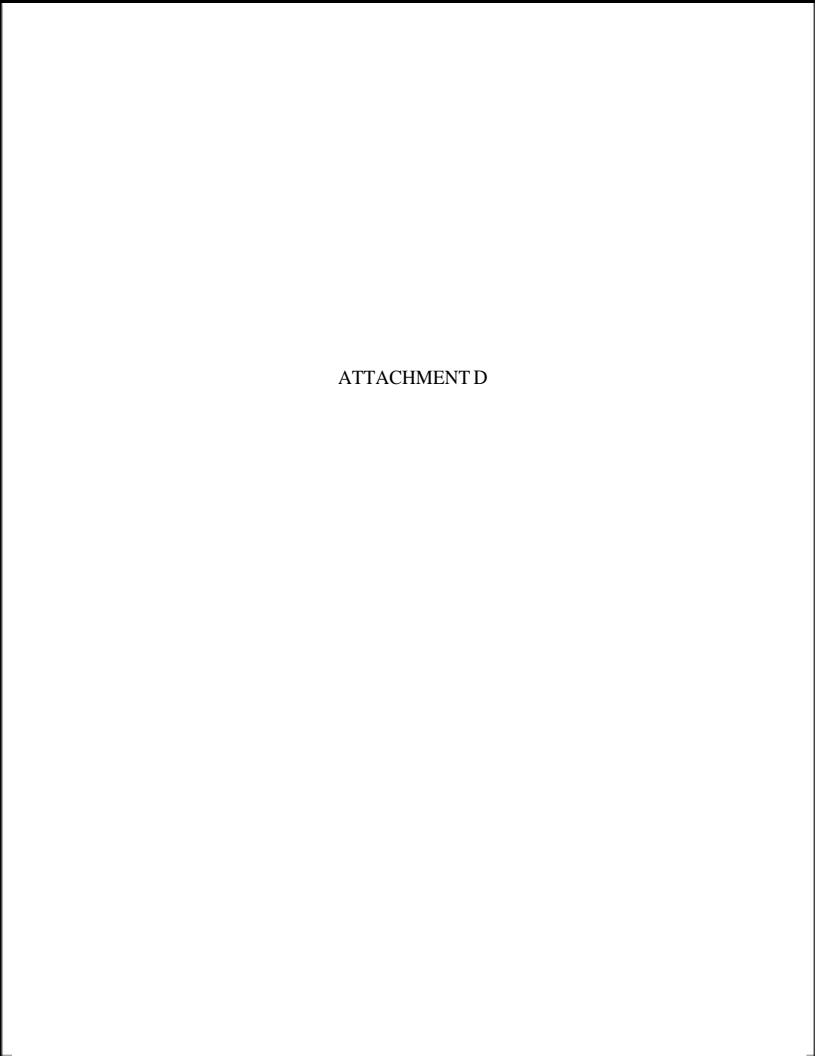
Lacrain Oriden

Briden ...

Associate Wildlife Biologist Central Valley Bay-Delta Branch

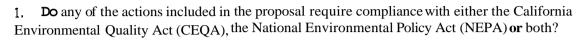
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Environmental Compliance Checklist

All applicants must fill out this Environmental Compliance Checklist. Applications must contain answers to the following questions to be responsive and to be considered for funding. *Failure to answer these questions and include them with the application will result in the application being considered nonresuonsive and not considered for funding.*



$$\frac{X}{YES}$$
 NO

2. If you answered yes to #1, identify the lead governmental agency for the CEQANEPA compliance.

California Deoartment of Fish and Game Lead Agency

- **3.** If **you** answered **no** to **#1,** explain why CEQANEPA compliance is not required for the actions in the proposal.
- **4.** If CEQA/NEPA compliance is required, describe how the project will comply with either **or** both of these laws. Describe where the project is in the compliance process and the expected date **of** completion. This proposal exclusively covers **work** on environmental documentation and permitting for the Hill Slough West Habitat Restoration Demonstration Project. Environmental documentation and permitting are expected to begin March 2001 and are to be completed by November 2001.
- **5.** Will the applicant require access public **or** private property that the applicant does not own to accomplish the activities in the proposal?

If yes, the applicant must attach written permission for access from the relevant property owner(s). Failure to include written permission **for** access may result in disqualification of the proposal during the review process. Research and monitoring field projects for which specific field locations have not been identified will be required to provide access needs and permission for access with **30** days of notification of approval.

6. Please indicate what permits or other proposal. Check all boxes that apply.	oprovals may be required for	the activities contained in your
LOCAL Conditional use permit Variance Subdivision Map Act approval Grading permit General plan amendment Specific plan approval Rezone Williamson Act Contract cancellation Other (Please specify) None required		
CESA Compliance Streambed alteration permit CWA § 401 certification Coastal development permit Reclamation Board approval Notification Other (Please specify) None required	X (CDFG) X (CDFG) (RWQCB) (Coastal Commission/I	3CDC)
FEDERAL ESA Consultation Rivers & Harbors Act permit CWA \$404 permit Other (Please specify) None required	X (USFWS) (ACOE) (ACOE)	

DPC = Delta Protection Commission

CWA = Clean Water Act

CESA = California Endangered Species Act

USFWS = **U.S.** Fish and Wildlife Service

ACOE = U.S. Army Corps of Engineers

ESA = Endangered Species Act

CDFG =California Department of Fish and Game RWQCB =Regional Water Quality Control Board

BCDC =Bay Conservation and Development Comm.

Land Use Checklist

All applicants must fill out this Environmental Compliance Checklist. Applications must contain answers to the following questions to be responsive and to be considered for funding. <u>Failure to answer these questions and include them with the application will result in the application being considered nonresponsive and not considered for funding.</u>

1.	Do the actions in the proposal involve physical changes to the land(i.e. grading, planting vegetation, or breeching levees) or restrictions in land use (i.e. conservation easement or placement of land in a wildlife refuge?					
	YES	X NO				
2.		of actions are involved in the proposal (i.e. research the Hill Slough West Habitat Restoration Demonstration and permitting only.				
3.	If YES to #1, what is the propo	osed land use change or restriction under the propos	sal?			
4.	If YES to #1, is the land curren	ntly under a Williamson Act contract?				
	YES	NO				
5.	If YES to #1, answer the follow	ving				
	Current land use Current zoning Current general plan desig	gnation				
6.		fied as Prime Farmland, Farmland of Statewide Important Farmland Maps?	portance or Unique			
	YES	NO				
7.	If YES to #1, how may acres of the proposal?	f Land will be subject to physical change or land us	e restrictions under			
8.	If YES to #1, is the property co	urrently being commercially farmed or grazed?				
	YES	NO				

9.	If YES to #8, what are	the number of employees/acre the total number of employees
10.	Will the applicant acquire an easement)?	y interest in land under the proposal (fee title or a conservation
	YES	X NO
11.	What entity/organization will	hold the interest?
12.	If Yes to #10, answer the follo	owing:
	Number of acres to be acquir	cquired under proposal ed in fee t to conservation easement
13.	For all proposals involving proposals involv	hysical changes to the land or restriction in land use, describe what entity
	Manage the property	
	Provide operations and main	tenance services
	Conduct monitoring	
14.	For land acquisitions (fee titl	e or easements), will existing water rights also be acquired?
	YES	NO
15.	Does the applicant propose a water?	any modifications to the water right or change in the delivery of the
	YES	X NO
16.	. If YES to #15, describe	

Agreement No.:_	
Exhibit:	

STANDARD CLAUSES -INTERAGENCY AGREEMENTS

Audit Clause. For Agreements in excess of \$10,000, the parties shall be subject to the examination and audit of the State Auditor for a period of three years after final payment under the Agreement. (Government Code Section 8546.7).

Availability of Funds. Work to be performed under this Agreement is subject to availability of funds through the State's normal budget process.

Interagency Payment Clause. For services provided under this Agreement, charges will be computed in accordance with State Administrative Manual Sections 8752 and 8752.1.

Termination Clause. Either State agency may terminate this Agreement upon thirty (30) days' advance written notice. The State agency providing the services shall be reimbursed for all reasonable expenses incurred up to the date of termination.

Severability. If any provision of this Agreement is held invalid or unenforceable by any court of final jurisdiction, it is the intent of the parties that all other provisions of this Agreement be construed to remain fully valid, enforceable, and binding on the parties.

Y2K Language. The Contractor warrants and represents that the goods or services sold, leased, or licensed to the State of California, its agencies, or its political subdivisions, pursuant to this Agreement are "Year 2000 compliant" For purposes of this Agreement, a good or service is Year 2000 compliant if it will continue to fully function before, at, and after the Year 2000 without interruption and, if applicable, with full ability to accurately and unambiguously process, display, compare, calculate, manipulate, and otherwise utilize date information. This warranty and representation supersedes all warranty disclaimers and limitations and all limitations on liability provided by or through the Contractor.

APPLICATION FOR 2. DATE SUBMITTED Applicant Identifier FEDERAL ASSISTANCE May 15, 2000 1. TYPE OF SUBMISSION: 3. DATE RECEIVED BY STATE State Application Identifier Application Construction Preapplication Construction 4. DATE RECEIVED BY FEOERAL AGENCY Federal Identifier Non-Construction Non-Construction 5. APPLICANT INFORMATION Legal Name: Organizational Unit: California Department of Fish and Game Central valley Bay-Delta Branch Address (give city, county, State, and zip code): Name and telephone number of person to be contacted on matters involving 4001 N. Wilson Way this application (give area code) Stockton, CA 95205 Laurie Briden (209) 948-7800 County: San Joaquin 7. TYPE OF APPLICANT: (enterappropriateletterin box) 6. EMPLOYER IDENTIFICATION NUMBER (EIN). X H. Independent School Dist. A. State I. State Controlled Institution of Higher Learning 8. TYPE OF APPLICATION:. B. County C. Municipal J. Private University X New Continuation Revision D. Township K. Indian Tribe E. Interstate L. Individual If Revision, enter appropriate letter(s) in box(es) F. Intermunicipal M. Profit Organization G. Special District N. Other (Specify) A. Increase Award B. Decrease Award C. Increase Duration Other(specify): D. Decrease Duration 9. NAME OF FEDERAL AGENCY: to. CATALOG OF FEDERAL DOMESTIC ASSISTANCE NUMBER: 11. DESCRIPTIVE TITLE OF APPLICANT'S PROJECT: Hill Slough West Habitat Restoration Demonstration Project, Phase II TITLE: 12. AREAS AFFECTED BY PROJECT (Cities, Counties, States, etc.): Solano county, Suisun City

I13, PROPOSEI	PROJECT	14. CONGRESSIO	NAL DISTRICTS	OF:	
Start Date March 2001	Ending Date Nov 2001	a Applicant California 1	lth District		b. Project California 7th District
15.ESTIMATE	FUNDING:		-	111	16. IS APPLICATION SUBJECT TO REVIEW BY STATE EXECUTIVE ORDER 12372 PROCESS?
a. Federal		\$ 8	37,000	,99	a. YES. THIS PREAPPLICATION/APPLICATION WAS MADE
b. Applicant		\$.			AVAILABLE TO THE STATE EXECUTIVE ORDER 12372 PROCESS FOR REVIEW ON:
c. State		\$.00	DATÉ
d. Local	-	S		. "	b. No. PROGRAM IS NOT COVERED BY E. 0.12372
e. Other		\$		99	OR PROGRAM HAS NOT BEEN SELECTED BY STATE FOR REVIEW
f. Program Inco	ome	s		,00	17. IS THE APPLICANT DELINQUENT ON ANY FEDERAL DEBT?
g. TOTAL		s	*	.00	Yes If "Yes," attach an explanation.
					LICATION/PREAPPLICATION ARE TRUE AND CORRECT, THE THE APPLICANT AND THE APPLICANT WILL COMPLY WITH THE

Operations Manager

Title

Previous Edition Usable

Alan Baracco

Authorized for Local Reproduction

Type Name of Authorized Representative

d. Signature of Authorized Representative

ATTACHED ASSURANCES IF THE ASSISTANCE IS AWARDED.

Standard Form 424 (Rev. 7-97) Prescribed by OMB Circular A-102

c. Telephone Number

May 15, 2000

e. Date Signed

(209) 948-7800

BUDGET INFORMATION - Non-Construction Programs

· 一个一个一个一个一个一个一个一个一个一个一个一个一个一个一个一个一个一个一个	を 1 10 10 10 10 10 10 10 10 10 10 10 10 1		CTION - NON-CON CTION A - BUDGETSU				
Grant Program Function	Catalog of Federal Domestic Assistance	Estimated Unobligated Funds		Naw or Revised Budget			
or Activity	Number	Federal	Non-Federal	Federal	Non-Federal	Total	
(a)	(b)	(C)	(d)	(e)	<u>(f)</u>	(g)	
l.Hill Slough Restorat	ion	\$	\$	\$ 87,000	\$	\$ 87,000	
2							
3.] 					
4.							
5. Totals		\$	\$	\$ 87,000	\$	\$ 87,000	
	1 1 1 1 1	SEC	TION B - BUDGET CAT	EGORIES			
3. Object Class Categori	ies	GRANT PROGRAM, F					
a. Personnel		\$ 64,000	\$	\$	\$	\$ 64,000	
b. Fringe Benefits	s					4	
c. Travel							
d. Equipment						_	
e. Supplies		5,000				5,000	
f. Contractual							
g. Construction							
.h.Other permit	fees	4,500				4,500	
i. Total Direct Cha	arges (sum of 6a-6h)	73,500				73,500	
j. Indirect Charge	s	13,5 000				13,500	
k. TOTALS <i>(sum</i>		\$ 87,000	\$	\$	S	\$ 87,000	
and the state of t	the Deligation Richard State	glovers in the		. *		and a	
. Program Income		\$	\$	\$	\$	\$	

51	SECTIO	N C - NON-FEDERAL		G. 10 75%, 与自由"微性病毒"	
(a) Grant Program		(b) Applicant	(c) State	(d) Other Sources	(e) TOTALS
8.		\$	\$	\$	\$
9.					
10.					
11.				.	
12. TOTAL (sum of lines 8-11)		\$	\$	\$	\$
	The second secon	ND - FORECASTED	CASH NEEDS	The state of the s	and the latest
	Total for 1st Year	1st Quarter	2nd Quarter	3rd Quarter	4th Quarter
13. Federal	\$	\$	\$	\$	\$
14. Non-Federal					
15. TOTAL (sum of lines 13 and 14)	\$	\$	\$	\$	\$
SECTION E-	BUDGET ESTIMATES O	F FEDERAL FUNDS N			
(a) Grant Program	າ			DING PERIODS (Years)	
		(b) First	(c) Second	(d) Third	(e)Fourth
16.	,	\$	\$	\$	\$
17.					
18.					
19.					
20. TOTAL (sum of lines 16-19)	\$.	\$.	\$	\$	
	SECTION	F - OTHER BUDGET	INFORMATION		
21, Direct Charges:		22. Indir	rect Charges:	,	gran.
23. Remarks:		•			



ASSURANCES - NON-CONSTRUCTION PROGRAMS

Public reporting burden for this collection of information is estimated to average 15 minutes per response, including time for reviewing instructions, searching existing data sources, gathering and maintaining the data needed, and completing and reviewing the collection of information. Send comments regarding the burden estimate or any other aspect of this collection of information, including suggestions for reducing this burden, to the Office of Management and Budget, Paperwork Reduction Project (0348-0040), Washington, DC 20503.

PLEASE DO NOT RETURN YOUR COMPLETED FORM TO THE OFFICE OF MANAGEMENT AND BUDGET. SEND IT TO THE ADDRESS PROVIDED BY THE SPONSORING AGENCY.

NOTE: Certain of these assurances may not be applicable to your project or program. If you have questions, please contact the awarding agency. Further, certain Federal awarding agencies may require applicants to certify to additional assurances. If such is the case, you will be notified.

As the duly authorized representative of the applicant, I certify that the applicant:

- Has the legal authority to apply for Federal assistance and the institutional, managerial and financial capability (including funds sufficient to pay the non-Federal share of project cost) to ensure proper planning, management and completion of the project described in this application.
- Will give the awarding agency, the Comptroller General of the United States and, if appropriate, the State, through any authorized representative, access to and the right to examine all records, books, papers, or documents related to the award: and will establish a proper accounting system in accordance with generally accepted accounting standards or agency directives.
- Will establish safeguards to prohibit employees from using their positions for a purpose that constitutes or presents the appearance of personal or organizational conflict of interest, or personal gain.
- Will initiate and complete the work within the applicable time frame after receipt of approval of the awarding agency.
- Will comply with the Intergovernmental Personnel Act of 1970 (42 U.S.C. §§4728-4763) relating to prescribed standards for merit systems for programs funded under one of the 19 statutes or regulations specified in Appendix A of OPM's Standards for a Merit System of Personnel Administration (5 C.F.R. 900, Subpart F).
- 6. Will comply with all Federal statutes relating to nondiscrimination. These include but are not limited to: (a) Title VI of the Civil Rights Act of 1964 (P.L. 88-352) which prohibits discrimination on the basis of race, color or national origin: (b) Title IX of the Education Amendments of 1972, as amended (20 U.S.C. §§1681-1683, and 1685-1686), which prohibits discrimination on the basis of sex; (c) Section 504 of the Rehabilitation

- Act of 1973, as amended (29 U.S.C. §794), which prohibits discrimination on the basis of handicaps: (d) the Age Discrimination Act of 1975, as amended (42 U.S.C. §§6101-6107), which prohibits discrimination on the basis of age: (e) the Drug Abuse Office and Treatment Act of 1972 (P.L. 92-255), as amended, relating to nondiscrimination on the basis of drug abuse: (f) the Comprehensive Alcohol Abuse and Alcoholism Prevention, Treatment and Rehabilitation Act of 1970 (P.L. 91-616), as amended, relating to nondiscrimination on the basis of alcohol abuse or alcoholism: (g) §§523 and 527 of the Public Health Service Act of 1912 (42 U.S.C. §§290 dd-3 and 290 ee 3), as amended, relating to confidentiality of alcohol and drug abuse patient records; (h) Title VIII of the Civil Rights Act of 1968 (42 U.S.C. \$53601 et seq.), as amended, relating to nondiscrimination in the sale, rental or financing of housing; (i) any other nondiscrimination provisions in the specific statute(s) under which application for Federal assistance is being made; and, (j) the requirements of any other nondiscrimination statute(s) which may apply to the application.
- 7. Will comply, or has already complied, with the requirements of Titles II and III of the Uniform Relocation Assistance and Real Property Acquisition Policies Act of 1970 (P.L. 91-646) which provide for fair and equitable treatment of persons displaced or whose property is acquired as a result of Federal or federally-assisted programs. These requirements apply to all interests in real property acquired for project purposes regardless of Federal participation in purchases.
 - Will comply, as applicable, with provisions of the Hatch Act (5 U.S.C. §§1501-1508 and 7324-7328) which limit the political activities of employees whose principal employment activities are funded in whole or in part with Federal funds.



- 9 Will comply, as applicable, with the provisions of the Davis-Bacon Act (40 U.S.C. §§276a to 276a-7), the Copeland Act (40 U.S.C. §276c and 18 U.S.C. §374), and the Contract Work Hours and Safety Standards Act (40 U.S.C. §§327-333), regarding labor standards for federally-assisted construction subagreements.
- 10 Will comply, if applicable, with flood insurance purchase requirements of Section 102(a) of the Flood Disaster Protection Act of 1973 (P.L. 93-234) which requires recipients in a special flood hazard area to participate in the program and to purchase flood insurance, if the total cost of insurable construction and acquisition is \$10,000 or more.
- Will comply with environmental standards which may be prescribed pursuant to the following: (a) institution of environmental quality control measures under the National Environmental Policy Act of 1969 (P.L. 91-190) and Executive Order (EO) 11514; (b) notification of violating facilities pursuant to EO 11738; (c) protection of wetlands pursuant to EO 11990; (d) evaluation of flood hazards in floodplains in accordance with EO 11988; (e) assurance of project consistency with the approved State management program developed under the Coastal Zone Management Act of 1972 (16 U.S.C. §§1451 et seq.); (f) conformity of Federal actions to State (Clean Air) Implementation Plans under Section 176(c) of the Clean Air Act of 1955, as amended (42 U.S.C. §§7401 et seq.); (a) protection of underground sources, of drinking water under the Safe Drinking Water Act of 1974, as amended (P.L. 93-523); and, (h) protection of endangered species under the Endangered Species Act of 1973, as amended (P.L. 93-205).

- Will comply with the Wild and Scenic Rivers Act of 1968 (16 U.S.C. §§1271 et seq.) related to protecting components or potential components of the national wild and scenic rivers system.
- 13. Will assist the awarding agency in assuring compliance with Section 106 of the National Historic Preservation Act of 1966, as amended (16 U.S.C. §470), EO 11593 (identification and protection of historic properties), and the Archaeological and Historic Preservation Act of 1974 (16 U.S.C. §§469a-1 et seq.).
- 14. Will comply with P.L. 93-348 regarding the protection of human subjects involved in research, development, and related activities supported by this award of assistance.
- 15. Will comply with the Laboratory Animal Welfare Act of 1966 (P.L. 89-544, as amended, 7 U.S.C. §§2131 et seq.) pertaining to the care, handling, and treatment of warm blooded animals held for research, teaching, or other activities supported by this award of assistance.
- 16. Will comply with the Lead-Based Paint Poisoning Prevention Act (42 U.S.C. §§4801 et seq.) which prohibits the use of lead-based paint in construction or rehabilitation of residence structures.
- 17. Will cause to be performed the required financial and compliance audits in accordance with the Single Audit Act Amendments of 1996 and OMB Circular No. A-133, "Audits of States, Local Governments, and Non-Profit Organizations."
- 18. Will comply with all applicable requirements of all other Federal laws, executive orders, regulations, and policies governing this program.

Ì	SIGNATURE OF AUTHORIZED CERTIFYING OFFICIAL	TITLE
	kul ans	Operations Manager
	APPLICANT ORGANIZATION	DATE SUBMITTED
	California Department of Fish and Game,	May 15,2000
	Central Valley Bay-Delta Branch	

U.S. Department of the Interior

Certifications Regarding Debarment, Suspension and Other Responsibility Matters, Drug-Free Workplace Requirements and Lobbying

Persons signing this form should refer to the regulations referenced below for complete instructions:

Certification Regarding Debarment, Suspension, and Other Responsibility Matters - Primary Covered Transactions - The prospective primary participant further agrees by submitting this proposal that it will include the clause titled, 'Certification Regarding Debarment, Suspension, Ineligibility and Voluntary Exclusion - Lower Tier Covered Transaction," provided by the department or agency entering into this covered transaction, without modification, in all lower tier covered transactions and in all solicitations for lower tier covered transactions. See below for language to be used; use this form for certification and sign; or use Department of the Interor Form 1954 (DI-1954). (See Appendix A of Subpart D of 43 CFR Part 12.)

Cetification Regarding Debarment, Suspension, Ineligibility and Voluntary Exclusion - Lower Tier Covered Transactions - (See Appendix B of Subpart D of 43 CFR Part 12.)

Certification Regarding Drug-Free Workplace Requirements - Alternate I. (Grantees Other Than Individuals) and Alternate II. (Grantees Who are Individuals) - (See Appendix C of Subpart D of 43 CFR Part 12.)

Signature on this form provides for compliance with certification requirements under 43 CFR Parts 12 and 18. The certifications shall be treated as a material representation of fact upon which reliance will be placed when the Department of the Interior determines to award the covered transaction, grant, cooperative agreement or loan.

PARTA: Certification Regarding Debarment, Suspension, and Other Responsibility Matters - Primary Covered Transactions

CHECK IF THIS CERTIFICATION IS FOR A PRIMARY COVERED TRANSACTION AND IS APPLICABLE.

- (1) The prospective primary participant certifies to the best of its knowledge and belief, that it and its principals:
 - (a) Are not presently debarred, suspended, proposed for debarment, declared ineligible, or voluntarily excluded from covered transactions by any Federal department or agency;
 - (b) Have not within a three-year period preceding this proposal been convicted of or had a civil judgment rendered against them for commission of fraud or a criminal offense in connection with obtaining, attempting to obtain, or performing a public (Federal State or local) transaction or contract under a public transaction; violation of Federal or State antitrust statutes or commission of embeddement, theft, forgery, bribery, falsification or destruction of records, making false statements, or receiving stolen properly:
 - (c) Are not presently indicted for or otherwise criminally or civilly charged by a governmental entity (Federal, State or local) with commission of any of the offenses enumerated in paragraph (1)(b) of this certification; and
 - (d) Have not within a three-year period preceding this application/proposal had one or more public transactions (Federal, State or local) terminated for cause or default.
- (2) Where the prospective primary participant is unable to certify to any of the statements in this certification, such prospective participant shall attach an explanation to this proposal.

PARTB Certification Regarding Debarment, Suspension, Ineligibility and Voluntary Exclusion Lower Lier Covered Transactions

CHECK__ IF THIS CERTIFICATION IS FOR A LOWER TIER COVERED TRANSACTION AND IS APPLICABLE.

- (1) The prospective lower terperticipant certifies, by submission of this proposal, that neither it nor its principals is presently debarred, suspended proposed for debarment, declared ineligible, or voluntarily excluded from participation in this transaction by any Federal department or agency.
- (2) Where the prospective lower tier participant is unable to certify to any of the statements in this certification, such prospective participant shall attach an explanation to this proposal.

DI-2010 March 1995 (This form consolidates DI-1953. DI-1954. DI-1955. DI-1958 and DI-1963) PARTC: Certification Regarding Drug-Free Workplace Requirements

WECK__ IFTHIS CERTIFICATION IS FOR AN APPLICANT WO IS NOT AN INDIVIDUAL.

Alternate I. (Grantees Other Than Individuals)

A. The grantee certifies that it will or continue to provide a drug-free workplace by:

- (a) Publishing a statement notifying employees that the unlawful manufacture, distribution, dispensing, possession, or use of a controlled substance is prohibited in the grantee's workplace and specifying the actions that will be taken against employees for violation of such prohibition:
- (b) Establishing an ongoing drug-free awareness program to inform employees about-

(1) The dangers of drug abuse in the workplace;

(2) The grantee's policy of maintaining a drug-free workplace;

- (3) Any available drug counseling, rehabilitation, and employee assistance programs; and
- (4) The penalties that may be imposed upon employees for drug abuse violations occurring in the workplace;
- (c) Making it a requirement that each employee to be engaged in the performance of the grant be given a copy of the statement required by paragraph (a):
- (d) Notifying the employee in the statement required by paragraph (a) that, as a condition of employment under the grant, the employee will -

(1) Abide by the terms of the statement: and

- (2) Notify the employer in witing of tis or her conviction for a violation of a criminal drug statute occurring in the workplace no later than five calendar days after such conviction;
- (e) Notifying the agency inwriting, within ten calendar days after receiving notice under subparagraph (d)(2) from an employee crothewise receiving actual notice of such conviction. Employers of convicted employees must provide notice, including position title, to every grant officer on whose grant activity the convicted employee was working, unless the Federal agency has designated a central point for the receipt of such notices. Notice shall include the identification number(s) of each affected grant;
- (f) Taking one of the following actions, within 30 calendar days of receiving notice under subparagraph (d)(2), with respect to any employee who is so convicted --

√ i) Taking appropriate personnel action against such an employee, up to and including termination, consistent with the requirements of the Rehabilitation Act of 1973, as amended: or

- (2) Requiring such employee to participate satisfactorily in a drug abuse assistance or rehabilitation program approved for such purposes by a Federal. State, or local health, law enforcement, or other appropriate agency;
- (g) Miking a good faith effort to continue to maintain a drug-free workplace through implementation of paragraphs (a), (b), (c), (d), (e) and (f).
- B. The grantee may insert in the space provided below the site(s) for the performance of work done in connection with the specific grant:

Place of Performance (Street address, city, county, state, zip c	ode)
--	------

4001 N. Wilson Wav

Stockton CA 95205

County: San Joaquin

Check if there are workplaces on file that are not identified here.

PARTD: Certification Regarding Drug-Free Workplace Requirements

CHECK __ IF THIS CERTIFICATION IS FOR AN APPLICANT WOO IS AN INDIVIDUAL.

Alternate II. (Grantees Who Are Individuals)

- (a) The gratese certifies that, as a condition of the grant, he or she will not engage in the unlawful manufacture, distribution. dispensing, possession, or use of a controlled substance in conducting any activity with the grant:
- (b) If convided of a criminal drug of fense resulting from a violation occurring during the conduct of any grant activity, he or she will be convided in writing, within 10 calendar days of the conviction, to the grant officer or other designee, unless the Federal agency design less a central point for the receipt of such notices. When notice is made to such a central point, it shall include the identification number(s) of each affected grant.

DI-'2010 March 1995 (This form consolidates DI-1953. DI-1954, DI-1955. DI-1956 and DI-1963) PARTE: Certification Regarding Lobbying

Certification for Contracts. Grants, Loans. and Cooperative Agreements

CHECK IF CERTIFICATION IS FOR **THE** AWARD OF ANY OF THE FOLLOWING AND THE AMOUNTEXCEEDS \$100,000: A **FEDEFAL** GRANT OR COOPERATIVE AGREEMENT, SUBCONTRACT, OR SUBGRANT UNDER THE GRANT OR COOPERATIVE AGREEMENT.

CHECK __ IF CERTIFICATION IS FOR THE AWARD OF A FEDERAL LOAN EXCEEDING THE AMOUNT OF \$150,000, OR A SUBGRANT OR SUBCONTRACT EXCEEDING \$100,000, UNDER THE LOAN.

The undersigned certifies, to the best of his or her knowledge and belief, that:

- (1) No Federal appropriated funds have been paid or will be paid. by or on behalf of the undersigned, to any person for influencing or attempting to influence and ficer or employee of an agency, a Member of Congress, and officer or employee of Congress, or an employee of a Member of Congress in connection with the awarding of any Federal contract, the making of any Federal grant. the making of any Federal loan, the entering into of any cooperative agreement, and the extension, continuation, renewal. amendment, or modification of any Federal contract, grant, loan, or cooperative agreement.
- (2) If any funds after than Federal appropriated funds have been paid or will be paid to any person for influencing or attempting to influence and fiber or employee of any agency, a Member of Congress, an officer or employee of Congress, or an employee of a Member of Congress in connection with this Federal contract, grant, loan, or cooperative agreement, the undersigned shall complete and submit Standard Form-LLL, "Disclosure Form to Report Lobbying," in accordance with its instructions.
- (3) The undersigned shall require that the language of this certification be included in the award documents for all subawards at all test (included subcortacts, subgarts, and contracts under grants, loans, and cooperative agreements) and that all subrecipients shall certify accordingly.

This catification is a material representation of fact upon which reliance was placed when this transaction was made or entered into. Submission of this certification is a presentation of fact upon which reliance was placed when this transaction was made or entered into. Submission of this certification is a presentation of fact upon which reliance was placed when this transaction imposed by Section 1352, title 31, U.S. Code. Any person who fails to file the required certification shall be subject to a civil penalty of not less than \$10,000 and not more than \$100,000 for each such failure.

As the authorized certifying official, I hereby certify that the above specified certifications are true,

SIGNATURE OF AUTHORIZED CERTIFYING OFFICIAL

TYPED NAME AND TITLE Operations Manager

DATE May 15,2000

DI-2010

March 1995

(This form consolidates Di-1953, DI-1954.

DI-1955. DI-1956 and DI-1963)